

File 348:EUROPEAN PATENTS 1978-2003/Aug W05  
File 349:PCT FULLTEXT 1979-2002/UB=20030904,UT=20030828  
Set Items Description  
S1 34 AU='SOSIN HOWARD' OR AU='SOSIN HOWARD B'  
S2 201056 COLOR? ? OR COLOUR? ?  
S3 7 S1 AND S2 [1 duplicate, 6 not relevant]

File 350:Derwent WPIX 1963-2003/UD,UM &UP=200358  
File 347:JAPIO Oct 1976-2003/May(Updated 030902)  
File 371:French Patents 1961-2002/BOPI 200209  
Set Items Description  
S1 15 AU='SOSIN H B'  
S2 9 AU='SOSIN H'  
S3 22 S1:S2  
S4 515419 COLOR? ? OR COLOUR? ?  
S5 1 S3 AND S4

**5/34/1 (Item 1 from file: 350)**

DIALOG(R)File 350:Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.  
014778455 \*\*Image available\*\*  
WPI Acc No: 2002-599161/200264

**Artificial turf used in golf course, has fibers with chromogen which changes color in response to heat or stress due to impact of golf club head on fibers, protruding from substrate**

Patent Assignee: SOSIN H B (SOSI-I); FEIL GOLF LLC (FEIL-N)

Inventor: **SOSIN H B**

Number of Countries: 097 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020091011	A1	20020711	US 2000250894	A	20001129	200264 B
			US 2001996461	A	20011128	

WO 200264221 A2 20020822 WO 2001US44604 A 20011129 200265

Priority Applications (No Type Date): US 2000250894 P 20001129; US 2001996461 A 20011128

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020091011	A1	10	A63B-069/36	Provisional application	US 2000250894
WO 200264221	A2 E		A63B-069/00		

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW  
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

Abstract (Basic): US 20020091011 A1

NOVELTY - The fibers (12) protruding from a substrate (10) has chromogen which is thermochromic, stress chromic or chemically chromic. The chromogen changes its **color** in response to change in environmental conditions such as heat and stress due to impact of a golf club head (14) on the fibers.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a **color** changing material.

USE - Used in golf course. Also used on dance floor, basket ball court, squash court and for marking safety areas in industrial setting.

ADVANTAGE - The detailed information about the divot is provided to the golfer as the feedback of the direction and location of impact is provided by the change in the **color** of the chromogen.

DESCRIPTION OF DRAWING(S) - The figure shows the behavior of the fibers when a ball placed on a mat is struck by the golf club head.

Substrate (10)

Fibers (12)

Golf club head (14)

pp; 10 DwgNo 2b/4

Derwent Class: P36

International Patent Class (Main): A63B-069/00; A63B-069/36

File 392:Boston Herald 1995-2003/Sep 11  
File 471:New York Times Fulltext 90-Day 2003/Sep 11  
File 532:Bangor Daily News 1996-2003/Sep 12  
File 631:Boston Globe 1980-2003/Sep 11  
File 633:Phil.Inquirer 1983-2003/Sep 11  
File 638:Newsday/New York Newsday 1987-2003/Sep 11  
File 718:Pittsburgh Post-Gazette Jun 1990-2003/Sep 12  
File 719:(Albany) The Times Union Mar 1986-2003/Sep 11  
File 731:Philad.Dly.News 1983- 2003/Sep 11  
File 733:The Buffalo News 1990- 2003/Sep 10  
File 738:(Allentown) The Morning Call 1990-2003/Sep 11  
File 743:(New Jersey)The Record 1989-2003/Sep 11

Set	Items	Description
S1	0	(HOWARD OR HOWIE) (2W)SOSIN AND TURF
S2	0	SOSIN AND TURF
S3	2	(HOWARD OR HOWIE) (2W)SOSIN [not relevant]

File 9:Business & Industry(R) Jul/1994-2003/Sep 11  
File 141:Readers Guide 1983-2003/Aug  
File 481:DELPHES Eur Bus 95-2003/Sep W1  
File 482:Newsweek 2000-2003/Aug 13  
File 484:Periodical Abs Plustext 1986-2003/Sep W1  
File 635:Business Dateline(R) 1985-2003/Sep 11  
File 636:Gale Group Newsletter DB(TM) 1987-2003/Sep 11  
File 646:Consumer Reports 1982-2003/Aug  
File 609:Bridge World Markets 2000-2001/Oct 01  
File 610:Business Wire 1999-2003/Sep 12  
File 613:PR Newswire 1999-2003/Sep 12  
File 810:Business Wire 1986-1999/Feb 28  
File 813:PR Newswire 1987-1999/Apr 30  
File 20:Dialog Global Reporter 1997-2003/Sep 12

Set	Items	Description
S1	2479	(ARTIFICIAL OR SYNTHETIC) (2W) (TURF OR GRASS OR GROUND COVER OR GROUND() COVER)
S2	170956	FLOOR() COVER???? OR CARPET??? OR RUG OR RUGS
S3	112	CHROMOGEN? ?
S4	625	CHROMOPHORE? ? OR PIGMENT() PRECURSOR? ?
S5	553663	FIBRE? ? OR FIBER? ?
S6	159825	STRAND? ? OR THREAD? ? OR FILAMENT? ?
S7	21364	(CHANG??? OR TURN???) (3W) (COLOR? ? OR COLOUR? ?)
S8	3	S1:S2 AND S3:S4
S9	3	RD (unique items) [1 too recent; 2 not relevant]
S10	131	S1:S2(S) S7
S11	52	S5:S6(3W) S7
S12	0	S10(S) S11
S13	0	S10 AND S11
S14	12	S11/2002:2003
S15	40	S11 NOT S14
S16	38	RD (unique items)
S17	2	S1:S2 AND S11

17/3,AB,K/1 (Item 1 from file: 636)  
DIALOG(R)File 636:Gale Group Newsletter DB(TM)  
(c) 2003 The Gale Group. All rts. reserv.  
04182324 Supplier Number: 54722727

**Magic at sea.**

Lampert-Greaux, Ellen  
Lighting Dimensions, pNA  
May, 1999

Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Newsletter; Trade  
Word Count: 1966

... lighting by Rimmer. The restaurant is entirely black and white when guests enter, from the **carpet** to the dishes, and in full living color by the end of their meal. Magic...And guess what? Even the paint spots on the palettes are lit with end-emitting **fibers** that also **change color**. Then the waiters get into the act; as the lights dim they arrive carrying small...

...area, the Oceaneer's Club has the look of Captain Hook's galleon with blue **carpet** for the ocean and brown for the wooden decks. The columns here look like piles...

17/3,AB,K/2 (Item 1 from file: 20)

DIALOG(R) File 20:Dialog Global Reporter  
(c) 2003 The Dialog Corp. All rts. reserv.  
15730901

**Homes & Property: The Ones To Watch: Homes and Property**

BARBARA CHANDLER

EVENING STANDARD, p26

March 21, 2001

JOURNAL CODE: FES LANGUAGE: English RECORD TYPE: FULLTEXT

WORD COUNT: 761

    SNAKESKIN shutters, stained-glass curtain trimmings, washbasins all aglow with colourchanging fibre optics: London Design Week is your chance to marvel at the latest and the best that the decorating world can produce.

    If you want ideas and choice for your new London home, you will find it here among a mass of fabrics, papers, paints, furniture, fittings and lighting for any situation.

    ... lined with modern lighting by Chad in unusual shapes and materials, while underfoot there are **rugs** by Limited Edition in leather, bamboo and even stinging nettles.

    Wash your hands in a...

...tough resin to decorate a washbasin, bath or even a loo.

    Other ideas glitter with **fibre** optics that constantly **change colour**. There are also chic little metal basins from Paris in a host of shapes (including...

... See them at silk specialists Chase Erwin (020 7795 0555), together with wool and leather **rugs** and the Natural History Museum lighting collection.

    Sparse, elegant and uncluttered shapes reminiscent of the...

File 160:Gale Group PROMT(R) 1972-1989  
 File 148:Gale Group Trade & Industry DB 1976-2003/Sep 12  
 File 47:Gale Group Magazine DB(TM) 1959-2003/Sep 02  
 File 80:TGG Aerospace/Def.Mkts(R) 1986-2003/Sep 11  
 File 649:Gale Group Newswire ASAP(TM) 2003/Sep 10  
 File 621:Gale Group New Prod.Annou.(R) 1985-2003/Sep 12

Set	Items	Description
S1	1356	(ARTIFICIAL OR SYNTHETIC) (2W) (TURF OR GRASS OR GROUND COVER OR GROUND() COVER)
S2	93756	FLOOR() COVER???? OR CARPET??? OR RUG OR RUGS
S3	76	CHROMOGEN? ?
S4	594	CHROMOPHORE? ? OR PIGMENT() PRECURSOR? ?
S5	441106	FIBRE? ? OR FIBER? ?
S6	99820	STRAND? ? OR THREAD? ? OR FILAMENT? ?
S7	16079	(CHANG??? OR TURN???) (3W) (COLOR? ? OR COLOUR? ?)
S8	1088	PC=2279 OR PC=2272
S9	94858	S1:S2 OR S8
S10	7	S9 AND S3:S4
S11	542	S9 AND S7
S12	1	S10/2002:2003
S13	6	S10 NOT S12
<b>S14</b>	<b>4</b>	<b>RD (unique items)</b>
S15	86	S5:S6(5N)S7
S16	0	S15 AND S8
S17	2	S1:S2(S)S15
<b>S18</b>	<b>2</b>	<b>S17 NOT S10</b>

14/3,AB,K/1 (Item 1 from file: 148)

DIALOG(R) File 148:Gale Group Trade & Industry DB

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07186720 SUPPLIER NUMBER: 15141498 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**Investigation of the long-term yellowing of architectural enamels as a function of coating composition. (Technical Focus: Resins)**

Danneman, Jeffrey H.; Smith, Arthur C.

American Paint & Coatings Journal, v78, n31, p41(11)

Jan 17, 1994

ISSN: 0098-5430 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 3723 LINE COUNT: 00340

ABSTRACT: The development of new high-solids resins was precipitated by an EPA regulation imposing a VOC limit of 250 grams per liter for certain architectural coatings. However, these new resins exhibited poor characteristics such as poor brushability and tint acceptance as well as excessive yellowing on interior surfaces during field tests. Results of a study shows that careful resin design is essential for improving resistance to long-term coloring.

... a well-known phenomenon with several proposed mechanisms(2). The generation of conjugated double bond **chromophores** associated with oxidative dry is the generally accepted cause of long-term yellowing. The formation of substituted pyrole **chromophores** as a result of the reaction of oxidizing fatty acids with atmospheric ammonia is reported...test exposed panels to ammonia fumes to accelerate the production of substituted pyrole and other **chromophores**. For this test, the parts were coated on the back side of a Leneta Form...known to react or interact with the radicals(4,5) responsible for cure and subsequent **chromophore** production.

Table 6

Effect of Paint Composition on Yellowing with Resin B

(12-Month Storage...a significant problem in new-home construction, where many building products, including latex paint and **carpet**, are used around freshly applied oil-based trim paints. This problem is the basis... Y.I. decreases. **Significant color change occurs**, however, even with tertiary amines. Obviously **chromophores** other than pyroles are being formed...

18/7/1 (Item 1 from file: 160)

DIALOG(R)File 160:Gale Group PROMT(R)

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02063343

News from the carpet makers; Trendsetter

Textile World November, 1988 p. 35

ISSN: 0040-5213

Carriage Industries' Tower **Carpets** Div's Trendsetter **carpet** features the Dynagraphix II dyeing process, which produces ever-changing sculptured cut loop surface character with ever **changing color** tone. It is 100% continuous **filament** nylon protected with Teflon.

18/7/2 (Item 1 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB

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07107078 SUPPLIER NUMBER: 15126195

**Martin Color-Fi recycles plastics into profits. (Martin Color-Fi Inc.)**

Eisele, Stella M.

Journal of Commerce and Commercial, v400, n28198, p6B(1)

April 6, 1994

File 8: Ei Compendex(R) 1970-2003/Aug W5  
 File 65: Inside Conferences 1993-2003/Sep W1  
 File 67: World Textiles 1968-2003/Aug  
 File 94: JICST-EPlus 1985-2003/Sep W2  
 File 95: TEME-Technology & Management 1989-2003/Aug W4  
 File 99: Wilson Appl. Sci & Tech Abs 1983-2003/Aug  
 File 119: Textile Technol.Dig. 1978-2003/Jun  
 File 144: Pascal 1973-2003/Aug W5  
 File 248: PIRA 1975-2003/Sep W1  
 File 323: RAPRA Rubber & Plastics 1972-2003/Sep  
 File 35: Dissertation Abs Online 1861-2003/Aug  
 File 111: TGG Natl.Newspaper Index(SM) 1979-2003/Sep 10  
 File 583: Gale Group Globalbase(TM) 1986-2002/Dec 13  
 File 6: NTIS 1964-2003/Sep W2  
 File 34: SciSearch(R) Cited Ref Sci 1990-2003/Sep W1  
 File 434: SciSearch(R) Cited Ref Sci 1974-1989/Dec  
 File 473: FINANCIAL TIMES ABSTRACTS 1998-2001/APR 02  
 File 474: New York Times Abs 1969-2003/Sep 11  
 File 475: Wall Street Journal Abs 1973-2003/Sep 11

Set	Items	Description
S1	1085	(ARTIFICIAL OR SYNTHETIC) (2W) (TURF OR GRASS OR GROUND COVER OR GROUND() COVER)
S2	56903	FLOOR() COVER???? OR CARPET??? OR RUG OR RUGS
S3	3623	CHROMOGEN? ?
S4	42521	CHROMOPHORE? ? OR PIGMENT() PRECURSOR? ?
S5	1342413	FIBRE? ? OR FIBER? ?
S6	308054	STRAND? ? OR THREAD? ? OR FILAMENT? ?
S7	9126	(CHANG??? OR TURN???) (3W) (COLOR? ? OR COLOUR? ?)
S8	57720	S1:S2
S9	45142	S3:S4
S10	1588430	S5:S6
S11	7	S8 AND S9
S12	6	RD (unique items)
S13	1	S12/2002:2003
<b>S14</b>	<b>5</b>	<b>S12 NOT S13</b>
S15	58	S8 AND S7
S16	14	S8(5N)S7
S17	13	RD (unique items)
S18	2	S17/2002 OR S17/2003
S19	10	S17 NOT (S11 OR S18)
<b>S20</b>	<b>10</b>	<b>Sort S19/ALL/PY,D</b>
S21	44	S15 NOT (S16 OR S11)
S22	39	RD (unique items)
S23	2	S22/2002 OR S22/2003
<b>S24</b>	<b>2</b>	<b>S22/2001 [not relevant]</b>
S25	35	S22 NOT S23:S24
<b>S26</b>	<b>35</b>	<b>Sort S25/ALL/PY,D</b>

14/6/4 (Item 3 from file: 119)  
 0427518 07662/82  
**MOISTURE INDICATOR.**  
 Patent Date: 19820504

14/9/1 (Item 1 from file: 8)  
 DIALOG(R) File 8: Ei Compendex(R)  
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03694099 E.I. No: EIP93081045383

**Title: Chapter 11/part 2. Continuous nylon carpet dyeing**

Author: Aspland, J.R.

Corporate Source: Clemson Univ, Clemson, SC, USA

Source: Textile Chemist and Colorist v 25 n 5 May 1993. p 35-39

Publication Year: 1993

CODEN: TCCOB6 ISSN: 0040-490X

Language: English

Document Type: JA; (Journal Article) Treatment: G; (General Review)

Journal Announcement: 9310W4

Abstract: Continuous dyeing of nylon **carpet**, stainblocker **carpet** finishing, the lightfastness requirements for automotive fabrics and lightfastness testing in general are discussed. The implications of stainblocking finishing processes are considered from the viewpoint of the dyehouse, cleaning technician and consumer. Colorfastness to ozone and the use of AQ reactive blue dyes are also introduced. The chemical structure of acid dye **chromophores** and the physical forms of acid dye products are discussed as well as a novel approach to the rapid batch dyeing of nylon. (Author abstract) 10 Refs.

Descriptors: **Carpet** manufacture; Textile processing; Dyeing; Synthetic fibers

Identifiers: Automotive fabrics; Light fastness; Syntans; **Carpet** finishing

Classification Codes:

819.5 (Textile Products & Processing); 819.3 (Fiber Chemistry & Processing); 819.2 (Synthetic Fibers)

819 (Textile & Fiber Technology)

81 (CHEMICAL PROCESS INDUSTRIES)

14/9/2 (Item 1 from file: 119)

DIALOG(R) File 119:Textile Technol.Dig.

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0622261 01510/99

**Chameleon Fibers: Dynamic Colors Change from Tunable Molecular and Oligomeric Devices.**

Gregory R. V.; Samuels R. J.; Hanks T.

(Clemson Univ); (Georgia Inst of Technol - Atlanta) (Furman Univ - Greenville)

Annual Report - National Textile Center : 69+, 7 pages (Nov. 1998).

Publication Year: 1998

CODEN: ANTCE5; ANTC

Language: English

7 refs.

The objectives of research on chameleon textiles was to develop color tunable fibers and fiber composite structures by the integration into or onto fibers of molecular or oligomeric organic chromophoric devices. These devices are capable of color change over the visible portion of the electromagnetic spectrum by the application of a static or dynamic electric field. End products planned for this type of material include wall coverings and floor coverings that change color when low voltage electric fields are applied. Preliminary research has begun the synthesis and characterization of unique monomeric and oligomeric molecules. To date, experiments have identified several promising molecules and optically characterized precursor materials.

Descriptors: APPLICATIONS; APPLYING; CHARACTER; COLOR; COMPOSITES; DIAGRAMS ; DYNAMIC CHARACTERISTICS; DYNAMICS; ELECTRICAL PROPERTIES;

ELECTRICITY ; ELECTROMAGNETIC DEVICES; EQUATIONS; EXPERIMENTATION;  
FIBERS ; **FLOOR COVERINGS** ; GRAPHS (CHARTS); IDENTIFICATION;  
MOLECULAR STRUCTURE ; MONOMERS; OBJECTIVES; OLIGOMERS; OPTICAL  
MEASUREMENT; OPTICAL PROPERTIES ; ORGANIC COMPOUNDS; PHYSICAL PROPERTIES;  
PLANNING; PRODUCTS; PROPERTIES ; RESEARCH; SPECTRA; STATICS;  
SYNTHESIS; WALL COVERINGS

Identifiers: COLOR- **chromophores** , color, dynamic characteristics,  
molecular structure, oligomers

Section Heading: A2 (Manmade fibers)

14/9/5 (Item 1 from file: 323)

DIALOG(R)File 323:RAPRA Rubber & Plastics

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00736233

**TITLE: DEVELOPMENTS IN THE COLOURING OF POLYURETHANES**

AUTHOR(S): Moody D; Ragsdale M

CORPORATE SOURCE: Milliken Chemical Co.

SOURCE: Macplas; 23, No.204, Dec.1998, p.101-3

ISSN: 0394-3453

JOURNAL ANNOUNCEMENT: 199909 RAPRA UPDATE: 199916

DOCUMENT TYPE: Journal Article

LANGUAGE: Italian

SUBFILE: (R) RAPRA

ABSTRACT: The colouring of PU foams for aesthetic purposes, for  
distinguishing between different grades and for masking yellowing is  
discussed. Problems associated with the use of water dispersed and  
predispersed pigments and colourants are examined, and developments in  
polymeric colourants and automatic colour compounding systems are  
reviewed.

SUBJECT HEADING (RAPRA): CELLULAR URETHANE POLYMERS, colouring, optical  
properties, colourants, pigments, automation; COLOURANTS, PU,  
cellular materials; AUTOMATION, colouring, PU, cellular materials;  
COLOURING, automation, PU, cellular materials; PIGMENTS, PU,  
cellular materials; OPTICAL PROPERTIES, colour, PU, cellular  
materials

TRADE NAMES: REACTINT

COMPANY NAME: DUNLOP FLEXIBLE FOAMS

IDENTIFIERS (Non-Polymer Terms): CARBON BLACK; ISOCYANATE; POLYOL

GEOGRAPHIC LOCATION: AUSTRALIA; USA

DESCRIPTORS: ABRASION; ADDED VALUE; ADDITIVE; AESTHETIC; AGGLOMERATE;  
APPEARANCE; APPLICATION; AQUEOUS DISPERSION; ARCHERY; AROMATIC;  
AUTOMATION; AUTOMOTIVE APPLICATION; BALL; BALLS; BOWLING BALL; BUMPER;  
CAR; **CARPET** ; **CARPET BACKING** ; CELLULAR MATERIAL; **CHROMOGEN** ;  
**CHROMOPHORE** ; COLOR; COLOR CODING; COLOR COMPOUNDING; COLOR SELECTION;  
COLORANT; COLORING; COLOUR; COLOUR CODING; COLOUR COMPOUNDING; COLOUR  
CONCEALING; COLOUR SELECTION; COLOURANT; COLOURING; COMPANIES; COMPANY;  
COMPOUNDING; COMPUTER CONTROL; CONTROL SYSTEM; CUSHION; DASHBOARD; DATA  
; DENSITY; DISCOLORATION; DISCOLOURATION; DISPERSION; ELASTOMER;  
ELECTRONIC APPLICATION; EXTRACTION; FLAMMABILITY; FLEXIBILITY; FLEXIBLE  
; FOAM; FOAMING; FOOD PACKAGING; FRUIT PACKAGING; HIGH DENSITY;  
HOSPITAL; HOUSEWARE; HOUSEWARES; HYDROXY GROUP; HYDROXYL GROUP;  
INORGANIC PIGMENT; INSTRUMENT PANEL; LIQUID ADDITIVE; LOW DENSITY;  
MACHINE; MACHINERY; MATTRESS; MECHANICAL PROPERTIES; MEDICAL  
APPLICATION; MICROVOID; MISCIBILITY; MIXING; NUCLEATION; OPACITY;  
OPTICAL PROPERTIES; ORGANIC PIGMENT; PACKAGING; PIGMENT; PLASTIC;  
PLASTICISER; PLASTICIZER; POLYMERIC COLORANT; POLYMERIC COLOURANT;

POLYMERIC PIGMENT; POLYURETHANE; PREDISPERSED; PROPERTIES; PU; REACTION  
INJECTION MOLDING; REACTION INJECTION MOULDING; REACTION MOULDING;  
REACTIVITY; RHEOLOGICAL PROPERTIES; RHEOLOGY; RUBBER; SEDIMENTATION;  
SELF-EXTINGUISHING; SOLUBILITY; SOLVENT EXTRACTION; SPONGE; SPORTS  
EQUIPMENT; SPORTS GOODS; STEERING WHEEL; SURFACE ACTIVE AGENT;  
SURFACTANT; TECHNICAL; THERAPEUTIC APPLICATION; THERMOPLASTIC;  
THERMOSET; TOYS; TRADE NAME; UPHOLSTERY; VEGETABLE PACKAGING; VISCOSITY  
; VOID; VOID FORMATION; WATER DISPERSAL; YELLOWING  
RAPRA CLASSIFICATION CODE: 1121; 43C6; 52P; 6124; 813; 99211  
CATEGORY CODES: OC; CC; KT; MC; SB; UJ

20/6/9 (Item 9 from file: 8)  
01976967  
Title: INSTRUMENTAL OBJECTIVITY.  
Publication Year: 1986

26/6/15 (Item 15 from file: 119)  
0576939 04569/94  
Evaluation of Carpet Surfaces by Means of Image Analysis.

26/6/21 (Item 21 from file: 67)  
00188570 WORLD TEXTILE NO: 1930750 SUBFILE: UMIST Library  
A further study of the colour assessment of new and worn carpets  
1992, (25 pages).., 1992

26/6/22 (Item 22 from file: 119)  
0532402 07570/89  
SUPPLIERS TO AMERICAN AUTO MAKERS EXPECT TO SEE CHANGES IN COLOR ,  
FIBER, AND STYLING.

26/6/23 (Item 23 from file: 119)  
0529419 04644/89  
EVALUATION OF THE USE OF TEXAS WOOL AND MOHAIR IN BLENDS WITH OTHER  
FIBERS TO PRODUCE FLAME RESISTANT FABRICS.

26/6/29 (Item 29 from file: 67)  
00145793 WORLD TEXTILE NO: 8702768 SUBFILE: BTG (Shirley  
Institute)  
Fleissner: late developments in continuous carpet dyeing, printing  
Textile World, 1987, 137, No.4, April, 81-84 (3 pages).., 1987

26/6/32 (Item 32 from file: 119)  
0425353 05777/82  
1983 COLOR FORECAST. REASONABLY MILD.

26/6/34 (Item 34 from file: 119)  
0340836 00836/78  
SOCKS, BUT WHICH ONES?

26/6/35 (Item 35 from file: 119)  
0510549 08123/87  
TESTING OF TEXTILES -- ASSESSMENT OF CHANGE IN APPEARANCE OF TEXTILE  
FLOORCOVERINGS BY THE SUBJECTIVE VISUAL METHOD.  
PRUEFUNG VON TEXTILIEN -- BEURTEILUNG DER AUSSENHENSVERAENDERUNG  
TEXTILER FUSSBODENBELAEGE -- SUBJEKTIV-VISUELLES VERFAHREN.

26/7/1 (Item 1 from file: 95)

DIALOG(R)File 95:TEME-Technology & Management

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01464740 20001101686

**Innovative process in BCF yarn production**

(Ein innovativer Prozess fuer die BCF-Garnproduktion)

Klambauer, G

SML, Lenzing, A

World Congress, Polypropylene in Textiles, Univ. of Huddersfield, GB, 5-6  
Jul, 20002000

Document type: Conference paper Language: English

Record type: Abstract

**ABSTRACT:**

Company SML located in Lenzing/Austria enlarges the production program for the benefit of **carpet** industry. SML has specialised for more than 30 years in the development and manufacture of extrusion technology and offers the following product range: Austrofil Multifilament Spinning Lines for FIDY, BCF, POY, Coextrusion Coating and Laminating Lines, Coextrusion Castfilm Lines, Monoaxial Stretching and Thermolaminating Lines, Breathable Film Lines, Coextrusion Calendering Lines for Film and Sheet, High-speed Film Winders, and Automatic Screen Belt Filters. The use of polypropylene has progressed rapidly since its introduction. Coloured olefin fibres are produced by adding masterbatch directly to the polymer during melt spinning. For the application in **carpets**, properties such as low density, high covering power, resistance to deterioration, stain and soil resistance, low static charge, easy clean, etc. are of special importance. Austrofil BCF offers a flexible production, fast **change** of **colour**, and is of compact design. The texturing system guarantees a very high and uniform crimp contraction. Also the thermal shrinkage is low and uniform. The count range lies between 1100 and 3000 dtex. Process speeds are up to 3000 m/min. the drawing and texturing unit stretches the yarn at a ratio common for BCF - total drawing ratio of roughly 1:2.5. All SML lines consist of self-produced parts and top quality components only. Extrusion coating lines for **carpets** in their well proved modular design can be supplied either fully equipped, i. e. with run-in and run-out device or for integration in existing powder coating lines with a coating unit including stabilisation bar and extrusion unit only.

26/7/2 (Item 2 from file: 95)

DIALOG(R)File 95:TEME-Technology & Management

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01395823 20000104760

**Innovative processes in BCF yarn production and extrusion coating**

(Innovative Prozesse in der BCF-Garnherstellung and beim Extrusionsbeschichten)

Klambauer, G

SML Maschinen, A

International Carpet Yearbook, v18, n2000, pp30,32, 2000

Document type: journal article Language: English

Record type: Abstract

ISSN: 0040-5116

**ABSTRACT:**

SML has started to design and produce compact synthetic fibre spinning lines, covering processes for the production of FDY, POY and BCF yarns. The Austrofil BCF line for **carpet** yarns presented to an expert audience at ITMA '99 was developed in accordance with the international trend of

increasing PP's market share in textile and **carpet** applications. Austrofil BCF offers following advantages to producers: flexible production of different yarn specifications, fast **change** of **colour**, compact design with horizontal positioning of stretching and texturing modules, a low height of 6,2 m, guarantee of a very high and uniform crimp contraction, easy handling and low maintenance, nozzle with plain surfaces, ceramic surfaces and an excellent yarn quality with a minimum of thermal shrinkage. The standard BCF multifilament spinning line consists of four modules with two threads each. For a sufficient melt quality a 90/28D barrier screw with an output capacity of up to 220kg/h is used in the extrusion unit. After extrusion the melt is pressed through a filter. With a steady and sufficient pressure flows the melt through the electrically-heated spinning beam to the spinnerets. The filaments (trilobal or delta, yarn titre from 1100 to 3000 dtex) are cooled by air in 3 horizontal zones. The drawing and texturing unit stretches the yarn at a ratio of roughly 1:2,5 (3000m/min, controlled air streams). In the texturing channel is a temperature of 140 to 150 degree C (7 to 8 bar). The long contact with the cooling drum ensures highest cooling efficiency. Finally, the yarn is led through an intermingling box and wound up on a bobbin. In the SML lab there are several machines for demonstration and test purposes. The R & D department works closely with customers and sub-suppliers. In combination with SML Extrusion coating lines, **carpets** of 100% PP can be made.

26/7/4 (Item 4 from file: 323)

DIALOG(R) File 323:RAPRA Rubber & Plastics

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00800391

**TITLE:** FLOOR COVERINGS

**AUTHOR(S):** Harwood I C; Wilson G J; Jones K M; Gansser-Potts M D

**CORPORATE SOURCE:** Amtico Co.Ltd.

**PATENT NUMBER:** US 6103044 A1

**PATENT DATE:** 20000815

**PATENT COUNTRY/KIND CODE:** US A1

**APPLICATION NUMBER:** US 12442 (US 12442-1998)

**APPLICATION DATE:** 19980123

**PRIORITY NUMBER:** GB 9523780

**PRIORITY DATE:** 19951121

**JOURNAL ANNOUNCEMENT:** 200103 **RAPRA UPDATE:** 200105

**DOCUMENT TYPE:** Patent

**LANGUAGE:** English

**SUBFILE:** (R) RAPRA

**ABSTRACT:** A backing film for incorporation as a backing layer in a resilient **floor covering** or a floor tile having at least two laminae and a method for making such a backing layer whereby wastage is reduced when the **colour** of the upper lamina is changed. Where there are two backing films having two or three laminae making up the backing layer the immediately coloured film resulting from a **change** in the **colour** of the upper lamina can be utilised without further processing on the second backing film where **colour** is not essential. Where there are three laminae making up a backing film the desired **colour** is introduced and established in the bottom lamina before the supply of the original **colour** to the upper lamina is stopped. The film can then be turned over for use with the former bottom lamina becoming the upper lamina.

26/7/5 (Item 5 from file: 119)

DIALOG(R) File 119:Textile Technol.Dig.  
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0639341 200008990

Special Fibres for the Millennium.

Vijay K.; Balasubramanian M.  
Textile Magazine (Madras) 41, No. 10: 25+, 6 pages (Aug. 2000).  
Publication Year: 2000  
CODEN: TEMADU; TEMI  
Language: English

Chameleon fibers change color , hue, depth of shade, or optical transparency in the presence of an electrical or magnetic field. Markets for such fibers--which incorporate molecules and oligomers that change their absorption or reflection of electromagnetic radiation in the infrared, visible, and ultraviolet spectra--include floor coverings , wall covering, billboards, biosensors, detectors, and military and consumer apparel. Photoadaptive fibers undergo illumination induced reversible optical and heat reflectivity changes. Derivation from polymeric films involves crosslinking polyvinyl alcohol with dimethylsulfoxide in the presence of polyacrylic acid. Intelligent fibers manufactured from stimuli sensitive oligomers respond to changes in pH, temperature, and electrolytes. They include thermal responsive hydrogels, amphophilic polymers, and shape memory polymers.

26/7/9 (Item 9 from file: 34)

DIALOG(R) File 34:SciSearch(R) Cited Ref Sci  
(c) 2003 Inst for Sci Info. All rts. reserv.  
06080202 Genuine Article#: XT925 Number of References: 9  
**Title: Prediction and verification of an iridescent synthetic fiber**  
Author(s): Rubin B (REPRINT) ; Kobsa H; Shearer SM  
Corporate Source: DUPONT CO INC,CENT SCI & ENGN/WILMINGTON//DE/19880  
(REPRINT)  
Journal: APPLIED OPTICS, 1997, V36, N25 (SEP 1), P6388-6392  
ISSN: 0003-6935 Publication date: 19970901  
Publisher: OPTICAL SOC AMER, 2010 MASSACHUSETTS AVE NW, WASHINGTON, DC  
20036  
Language: English Document Type: ARTICLE

Abstract: An optical model that predicts the reflection of light by a synthetic fiber of arbitrary cross-sectional shape is described. The model uses a Monte Carlo simulation of an exact ray trace of light for incident rays directed at a selected angle to the fiber axis. The model revealed an optical effect in round fibers that led to the prediction of a new mechanism for iridescence ( change -of color with angle of illumination or view) in a fabric by means of round, concentric, sheath-core fibers, with core size less than or equal to 40% by volume and with the sheath and core dyed different colors. The prediction has been verified in actual fabrics. (C) 1997 Optical Society of America.

File 350:Derwent WPIX 1963-2003/UD,UM &UP=200358

File 347:JAPIO Oct 1976-2003/May(Updated 030902)

File 371:French Patents 1961-2002/BOPI 200209

Set	Items	Description
S1	1575	(ARTIFICIAL OR SYNTHETIC) (2W) (TURF OR GRASS OR GROUND COVER OR GROUND() COVER)
S2	28231	FLOOR() COVER???? OR CARPET??? OR RUG OR RUGS
S3	1744	CHROMOGEN? ?
S4	2443	CHROMOPHORE? ? OR PIGMENT() PRECURSOR? ?
S5	878888	FIBRE? ? OR FIBER? ?
S6	282126	STRAND? ? OR THREAD? ? OR FILAMENT? ?
S7	16718	(CHANG??? OR TURN???) (3W) (COLOR? ? OR COLOUR? ?)
S8	15344	IC=A63B-069
<b>S9</b>	<b>9</b>	<b>S1:S2 AND S3:S4</b>
S10	1	S1 AND S7
S11	0	S10 NOT S9
S12	42	S2 AND S7
S13	525	S5:S6(S)S7
S14	7	S12 AND S13
S15	0	S12 AND S8
<b>S16</b>	<b>6</b>	<b>S14 NOT S9</b>

**9/26,TI/4 (Item 4 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

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009142712

WPI Acc No: 1992-270150/199233

**Azo dimer and trimer fugitive tints - used with heat setting treatments,  
lighter shades of prod. and at increased tint-levels, resisting  
penetration into non-crystalline regions**

**9/26,TI/5 (Item 5 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

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009074483

WPI Acc No: 1992-201902/199225

**Cross-staining of nylon cationic fibres with acid dyes is prevented - by  
using aq. vinyl sulphone dyes with 3 or more sulphonc acid and fibre  
reactive substits. at pH 2-4 for the anionic-dyeable fibres**

**9/26,TI/9 (Item 9 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

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000857905

WPI Acc No: 1972-17867T/197211

**Shampoo inhibiting stain absorption - for textiles esp carpets**

**9/7,K/6 (Item 6 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

008705720

WPI Acc No: 1991-209741/199129

**New polyoxyalkylated nucleophile derivs. - with glycidol residues in  
polyoxyalkylene chain esp. useful for prodn. of coloured polymers**

Patent Assignee: MILLIKEN RES CORP (DEER )

Inventor: KLUGER E W; MOODY D J; REKERS J W

Number of Countries: 016 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 437105	A	19910717	EP 90314335	A	19901228	199129 B
US 5082938	A	19920121	US 90486992	A	19900301	199206
JP 5097994	A	19930420	JP 91196178	A	19910108	199320
US 5290921	A	19940301	US 90461852	A	19900108	199409
EP 437105	B1	19961113	EP 90314335	A	19901228	199650
DE 69029128	E	19961219	DE 629128	A	19901228	199705
			EP 90314335	A	19901228	
JP 3160317	B2	20010425	JP 91196178	A	19910108	200126

Priority Applications (No Type Date): US 90486992 A 19900301; US 90461852 A 19900108

Cited Patents: CH 557860; EP 72621; US 3446757; US 4086151; US 4284729; US 4751254

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 437105	A				
					Designated States (Regional): AT BE CH DE ES FR GB GR IT LI LU NL SE
JP 5097994	A	125		C08G-065/26	
US 5290921	A	83		C09B-029/033	
EP 437105	B1	E 138		C09B-069/10	
					Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LI LU NL SE
DE 69029128	E			C09B-069/10	Based on patent EP 437105
JP 3160317	B2	122		C08G-065/26	Previous Publ. patent JP 5097994

Abstract (Basic): EP 437105 A

Cpds. of formula Y(Z)<sub>n</sub> (I) are new: Y is the residue of an organic nucleophile; n = 1-6; each Z is a polyoxyalkylene gp. defined as follows: (a) it contains at least one glycidol residue segment contg. at least one glycidol residue; (b) at least one of the primary oxy sites of the glycidol segment is linked directly to a first epoxide segment contg. at least one residue of a C3+ epoxide; (c) in the first epoxide segment, the C3+ epoxide residue is either linked directly to the primary oxy site of the glycidol segment or is within 10 epoxide residues of this site; (d) the first epoxide segment is linked through a secondary oxy site directly to a second epoxide segment contg. at least one epoxide residue with a terminal prim. OH gp.; and (e) at least one secondary oxy site in the glycidol residue segment is linked directly to a third epoxide segment with a terminal primary OH gp.

USE - (I) where Y is a **chromophore** are useful as colorants, esp. for reaction with isocyanates to produce coloured polyurethanes, e.g. in the mfr. of **carpet** underlay glues or shoe soles. They may also be used to colour other thermosetting or thermoplastic resins, e.g. polyolefins. (138pp Dwg.No.0/0)

Abstract (Equivalent): EP 437105 B

A process for preparing a compound having the formula Y-(Z)<sub>1-6</sub> wherein Y is the residue of an organic nucleophile; each group Z is a poly(oxyalkylene) moiety comprising at least one glycidol segment comprising at least one glycidol residue, said process comprising the steps of: 1. providing a reaction system containing an initial reactant having at least one glycidol segment comprised of at least one glycidol residue of formula -CH<sub>2</sub>CH(OH)CH<sub>2</sub>O- or -CH<sub>2</sub>CH(OH)CH<sub>2</sub>OH said glycidol segment containing at least one primary hydroxyl group and at least one secondary hydroxyl group; 2. contacting said reaction system with a first epoxide reactant material comprised of a secondary hydroxyl producing epoxide having three or more carbon atoms; 3. contacting said

reaction system with a second epoxide reactant material comprised of a primary hydroxyl producing epoxide, the addition of said epoxide reactant materials being in a selective sequence firstly to produce a secondary hydroxyl containing epoxide residue segment linked directly to at least one primary oxy site on said glycidol segment and secondly to terminate at least a major portion of the resulting poly(oxyalkylene) chains or branches with primary hydroxyl groups.

(Dwg.0/0)

Abstract (Equivalent): US 5082938 A

The cpd. is of formula Y-(Z) 1-6 (I) (where Y = aniline, 1,2,3,4-tetrahydroquinolines, 3,4-dihydro-2H-1,4-benzoxazine, 2-aminothiazole, indole, 2,3-dihydroindole, carbazole, naphthylamine, phenoxazine, phenothiazine, diphenylamine, julolidine, 2-amino thiophene and aminopyridine; and each Z = poly(oxyalkylene)) having glycidal segment(s) and prim. oxy site of segment is linked to an epoxide segment of at least 3C. Epoxide residue is linked to glycidol segment at prim. oxy site or is within 16 epoxy residues of site. Segment is linked through sec. oxy site to second epoxide segment contg. epoxide(s) having prim. terminal OH. Sec. OH of glycidol segment is linked to 3rd epoxide segment having prim. terminal OH. Z has mol.wt. 200-10000.

USE/ADVANTAGE - Improves reactivity and compatibility of polymeric substrates. (40pp)

US 5290921 A

Prim. alcohol hydroxyl enhanced colourant of formula C-(Z)1-4 is new, where C is an azo **chromogen** and Z is a polyoxyalkylene gp. of at least 2 moles of glycidol reacted with an amino gp. of the **chromogen**, the residue of at least 1 mol of a sec. OH forming alkylene oxide comprising propylene oxide or butylene oxide reacted with each prim. OH site of the glycidol gp. and at least 1 mol of ethylene oxide reacted with each sec. OH site on the glycidol gps. and the sec. OH forming alkylene oxide, provided that the total number of gps. of the sec. OH forming alkylene oxides and ethylene oxide is upto 200, pref. up to 42. Pref. the glycidol gps. comprise 5-50 mole % of the total glycidol gps; sec. OH forming alkylene oxide gps. and ethylene oxide gps.

USE/ADVANTAGE - The colourant has improved reactivity in e.g. polyurethane foams for imparting permanent colouring.

Dwg.0/0

Derwent Class: A25; A60; A83; E24; F07; G03

International Patent Class (Main): C08G-065/26; C09B-029/033; C09B-069/10

International Patent Class (Additional): C07C-211/46; C07C-217/28;

C07D-303/18; C07D-303/36; C07D-405/12; C07D-405/14; C07D-409/12;

C07D-413/14; C07D-417/12; C07D-417/14; C07D-455/04; C08G-018/48;

C08G-065/28; C08G-065/321; C08L-071/02; C09B-023/00; C09B-029/085;

C09B-029/09; C09B-029/36; C09B-029/44; C09B-031/043; C09B-044/10;

C09B-044/12; C09B-044/14; C09B-044/18; C09B-044/20; C09B-057/00;

D06P-003/24

9/7,K/7 (Item 7 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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007160174

WPI Acc No: 1987-157183/198722

Polyurethane foams contg. microencapsulated thermochromic compsn. - that comprises electron-donating chromogenic cpd., acidic cpd. and solvent

Patent Assignee: BRIDGESTONE CORP (BRID ); MATSUI SHIKISO KAGAKU KOGYOSHO

(MATC )  
Inventor: HASEGAWA H; HAYASHI Y; KOGA T; OKUYAMA T; SHIMIZU G; TAKEI A;  
TORIGOE H  
Number of Countries: 014 Number of Patents: 002  
Patent Family:  
Patent No Kind Date Applicat No Kind Date Week  
US 4666949 A 19870519 US 86825076 A 19860131 198722 B  
EP 231030 A 19870805 EP 87101237 A 19870129 198731  
Priority Applications (No Type Date): US 86825076 A 19860131  
Cited Patents: 3.Jnl.Ref; A3...8835; JP 57076072; JP 60173028; JP 62015236;  
No-SR.Pub  
Patent Details:  
Patent No Kind Lan Pg Main IPC Filing Notes  
US 4666949 A 6  
EP 231030 A E  
Designated States (Regional): AT BE CH DE ES FR GB GR IT LI LU NL SE  
Abstract (Basic): US 4666949 A

A **thermochromatic polyurethane foam** comprises a polyol and a polyisocyanate as main components and a thermochromic compsn. (I) that acts as a colouring agent added alone or with a usual dye or pigment.

(I) is microencapsulated and comprises (a) an electron-donating chromogenic material, (b) an acidic substance and (c) a solvent.

(a) is used in an amt. of 1-50 pts. by wt./100 pts. by wt. of polyol; (b) is a 1,2,3-triazole; and (c) is an alcohol, ester, azomethines or amide having a b.pt. of at least 150 deg.C.

**USE/ADVANTAGE - The foams retain the desired properties of polyurethane foams and are able to reversibly change colour. They are used for the mfr. of toys that change colour with atmos. temp., ornaments that change colour in different seasons, cleaners for kitchens and baths, temp. sensors for living quarters, filters for detecting abnormal temp. of penetrating liqs. or gases, soundproofing and insulating materials, hydroponic materials for detecting water temps. and cores for heater-incorporating carpets .**

0/0

Derwent Class: A25; E13; G04  
International Patent Class (Additional): C08G-018/14; C08K-005/00

**9/7,K/8 (Item 8 from file: 350)**

DIALOG(R)File 350:Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.  
003178428  
WPI Acc No: 1981-38979D/198122

**Dyeing of textiles made of cellulose fibres - using reactive azo or anthraquinone dyes with cyanamide or dicyanamide opt alkyl substd.**

Patent Assignee: TOYOBO KK (TOYM )  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No Kind Date Applicat No Kind Date Week  
JP 56037380 A 19810411 198122 B  
Priority Applications (No Type Date): JP 79110604 A 19790829  
Abstract (Basic): JP 56037380 A

(a) At least one reactive dye of formula (I) and (b) at least one amine cpd. selected from among cyanamide, dicyandiamide and alkyl substd. derivs. thereof, are applied to textile goods made of cellulose fibre, followed by heat treatment, where D is dye matrix with azo or anthraquinone **chromophore** ; X is -(CH<sub>2</sub>)<sub>n</sub>-; Y is -CO-, -SO<sub>2</sub>- or -; Z is

-CH<sub>2</sub>Cl, -CH=CH<sub>2</sub>, -CH<sub>2</sub>CH<sub>2</sub>Cl, -C(Cl)=CH<sub>2</sub>, -C(Br)=CH<sub>2</sub>, -C(F)=CH<sub>2</sub> or gp.  
(II); n is 0 or 1-2; R is H or 1-6C alkyl gp.

Cellulosic textile goods include yarns, woven, knitted and nonwoven fabrics, **carpet**, etc. made of cotton, viscose rayon, polynosic, cuproammonium rayon, linen, regenerated cellulose fibre and their blends with polyester, polyamide, polyacrylonitrile, wool, silk, etc.

Cellulosic textile goods are dyed uniformly in clear and fast colour in acidic or weakly alkaline condition

Derwent Class: A18; A23; A60; E24; F06

International Patent Class (Additional): D06P-003/66

16/7,K/1 (Item 1 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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015160749

WPI Acc No: 2003-221277/200321

**Polyamide-based material used for production of fibres, film and moulded products, comprises nano-scale titanium dioxide particles**

Patent Assignee: BASF AG (BADI )

Inventor: KLOSTERMANN R; NEUBERG R; RICHTER K; WEISS R; WILMS A

Number of Countries: 100 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200294921	A1	20021128	WO 2002EP5475	A	20020517	200321 B
DE 10125137	A1	20021205	DE 1025137	A	20010522	200321

Priority Applications (No Type Date): DE 1025137 A 20010522

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 200294921	A1	G	24	C08K-003/22	
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Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

DE 10125137 A1 C08L-077/02

Abstract (Basic): WO 200294921 A1

NOVELTY - Polymer material (I) based on (a) a polymer (II) with repeating amide groups in the main chain also comprises (b) 0.01-5 wt% titanium dioxide (III) with an average particle size (d<sub>50</sub>) of up to 150 nm.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for fibres, sheet material and moulded products containing the polymer material (I).

USE - For the production of filaments, fibres, film, sheet material and moulded products, especially e.g. polyamide 6 filaments for production of textiles or **carpet** material.

ADVANTAGE - Polyamide-based material which enables the production of fibres, film and moulded products with improved thermal stability as shown by smaller reductions in amino end-group content, viscosity, depth of color and uniformity of color.

pp; 24 DwgNo 0/0

Derwent Class: A23; E32; F01

International Patent Class (Main): C08K-003/22; C08L-077/02

International Patent Class (Additional): C08G-069/46; C08G-069/48;  
C08J-005/02; C08K-007/18; C08L-077/00; D01F-006/60

Extension Abstract:

... for 1.5 hours at 275degreesC and 18 bar to give polyamide 66  
(product Ib). **Fibres** spun from (Ib) were heat-set for 2 minutes at  
120degreesC, resulting in a change...  
...group content (AEG) and +1 (-14) % in relative viscosity (RV). Knitted  
fabric made from these **fibres** was heat-set as above and then dyed  
with a mixture of Intrazone Red G...  
...special titanium dioxide (above) was replaced by 0.3 wt% standard  
titanium dioxide. The relative **change** in depth of **color** (D) was 8%  
(i.e. D for Ib after heat-setting/D for V1 after...)

16/7,K/2 (Item 2 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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010639780

WPI Acc No: 1996-136733/199614

Thermal colour changeable nonwoven fabric for high durability - prepd. by  
blending crimped short heat melting fibre and crimped short non-melting  
polyester fibre, useful for carpets and covering material

Patent Assignee: PILOT INK CO LTD (PILO )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 8027653	A	19960130	JP 94180939	A	19940708	199614 B

Priority Applications (No Type Date): JP 94180939 A 19940708

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 8027653	A		4	D04H-001/42	

Abstract (Basic): JP 8027653 A

A thermal colour changeable nonwoven fabric is prepd. by blending:  
(a) 5-40 pts. wt. crimped short fibre of heat melting fibre, and  
(b) 60-95 pts. wt. crimped short fibre which is not melted at the  
m.pt. of the fibre (a).

The **fibre** (b) is fixed by heat melting of the **fibre** (a), and  
**also at least 10 wt.% of the fibre (b) changes colour on change  
of temp.**

USE - The nonwoven fabric is useful for **carpet**, table cloth, **rug**  
, interior articles, case of heating or cooling articles, bag and  
covering material.

ADVANTAGE - The fabric is produced by using a heat melting fibre  
such as low m.pt. polyester as a binder. Also a thermal colour  
changeable fibre is blended in a body in this step, so that  
productivity and durability as a sheet material can be satisfied. It is  
suitable as a thermal colour changeable base material, and it is  
possible to print non-thermal colour changeable image or thermal colour  
changeable image.

Dwg.0/0

Derwent Class: A94; F04

International Patent Class (Main): D04H-001/42

International Patent Class (Additional): C09K-009/02; D01F-001/10;

D01F-006/90; D04H-001/54; D06M-023/12

16/7,K/4 (Item 1 from file: 347)

DIALOG(R) File 347:JAPIO

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05304777 \*\*Image available\*\*

**MULTICOLOR PATTERNED BULKY YARN AND MULTICOLOR PATTERNED CARPET USING THE SAME BULKY YARN**

PUB. NO.: 08-260277 [JP 8260277 A]  
PUBLISHED: October 08, 1996 (19961008)  
INVENTOR(s): INOUE SHOZO  
HONDA HIROMI  
SUZUKI KIYOICHI  
APPLICANT(s): TORAY IND INC [000315] (A Japanese Company or Corporation),  
JP (Japan)  
APPL. NO.: 07-063739 [JP 9563739]  
FILED: March 23, 1995 (19950323)

ABSTRACT

PURPOSE: To obtain a multicolor patterned bulky yarn having varicolored color tones better in balance among colors than a conventional interlaced multicolor bulky yarn and a multicolor patterned **carpet** good in balance among the color tones using the multicolor bulky yarn.

CONSTITUTION: This multicolor patterned bulky yarn has single interlaced parts 6 and 7 only in a part of synthetic **fiber** multifilament bundles and wholly interlaced parts 1, 2...5 in the whole of the multicolor patterned bulky yarn comprising the synthetic **fiber** multifilament bundles, in the multicolor patterned bulky yarn comprising the plural kinds of the synthetic **fiber** multifilament bundles different in colors. Furthermore, **the multicolor patterned carpet, having a continuously changed color pattern** and capable of manifesting the calm pattern with slight skitteriness in good balance is obtained by tufting a pile fabric with the multicolor patterned bulky yarn and further forming a backing resin layer.

16/7,K/5 (Item 2 from file: 347)

DIALOG(R) File 347:JAPIO

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04264764 \*\*Image available\*\*

**HOT CARPET AND HOT CARPET COVER**

PUB. NO.: 05-256464 [JP 5256464 A]  
PUBLISHED: October 05, 1993 (19931005)  
INVENTOR(s): HIRAMATSU KENJI  
CHIGA KUNIYUKI  
APPLICANT(s): KURARAY CO LTD [000108] (A Japanese Company or Corporation),  
JP (Japan)  
PILOT INK CO LTD [403379] (A Japanese Company or Corporation),  
JP (Japan)  
APPL. NO.: 04-087540 [JP 9287540]  
FILED: March 12, 1992 (19920312)

ABSTRACT

PURPOSE: To make it possible to judge whether or not a hot **carpet** is electrically energized by eye by **employing complex fibers containing material which is reversibly, thermally discolored as a part of fibers constituting the surface layer of the hot carpet.**

CONSTITUTION: Part of the surface layer of a hot **carpet 1** is comprised of synthetic fibers containing material which is reversibly, thermally discolored and, as the synthetic fibers, complex fibers comprising thermoplastic polymers containing microcapsuled materials which are reversibly, thermally discolored are used. In the case that, for example, the **carpet 1** has no changeover of electric heating region, characters 2 or patterns 3 are formed on a part of or the whole of the **carpet 1** using

the complex **fibers** containing the material so that electric heating can be displayed by the reversible **change** of **color** tone of the characters 2 or patterns 3. As a result, whether or not there is electric power supply can be clearly judged usually.

16/7,K/6 (Item 3 from file: 347)

DIALOG(R) File 347:JAPIO

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04154650 \*\*Image available\*\*

CUT PILE TUFTED **CARPET**

PUB. NO.: 05-146350 [JP 5146350 A]

PUBLISHED: June 15, 1993 (19930615)

INVENTOR(s): FUJIWARA TAKASHI

APPLICANT(s): NEGI SANGYO KK [486547] (A Japanese Company or Corporation),  
JP (Japan)

APPL. NO.: 03-299808 [JP 91299808]

FILED: October 19, 1991 (19911019)

ABSTRACT

PURPOSE: To provide a pepper-and-salt pattern having a fine color tone on a cut pile surface by tufting pile yarn having two kinds of falsely twisted spinning slivers in different colors doubled and twisted on a foundation.

CONSTITUTION: A tufted **carpet** 15 has cut pile 14 formed by tufting pile yarn 12 made by doubling and twisting a thermoplastic synthetic **fiber** spinning silver 11A formed by false twist through a pneumatic false twisting device and a thermoplastic synthetic **fiber** spinning silver 11B having a color or dyeing affinity different from that of the spinning sliver 11A and formed by false twist through the pneumatic false twisting device on a foundation 13. Most of staple **fibers** constituting the spinning silver are arranged in parallel in the longitudinal direction of these spinning silvers 11A, 11B. Also, the longitudinal direction N of these staple **fibers** is arranged parallel to the twisted direction M of the spinning slivers 11A, 11B formed by doubling and twisting. Thus, pepper-and-salt patterns composed of sectional surfaces 23A, 23B of the spinning slivers 11A, 11B have the depth of gradually **changing color** between different colored spots.

File 348:EUROPEAN PATENTS 1978-2003/Aug W05

File 349:PCT FULLTEXT 1979-2002/UB=20030904,UT=20030828

Set	Items	Description
S1	436	(ARTIFICIAL OR SYNTHETIC) (2W) (TURF OR GRASS OR GROUND COVER OR GROUND() COVER)
S2	10572	FLOOR() COVER???? OR CARPET??? OR RUG OR RUGS
S3	4422	CHROMOGEN? ?
S4	8423	CHROMOPHORE? ? OR PIGMENT() PRECURSOR? ?
S5	221338	FIBRE? ? OR FIBER? ?
S6	162296	STRAND? ? OR THREAD? ? OR FILAMENT? ?
S7	19329	(CHANG??? OR TURN???) (3W) (COLOR? ? OR COLOUR? ?)
S8	1812	IC=A63B-069
<b>S9</b>	<b>4</b>	<b>S1:S2(S)S3:S4</b>
S10	1	S3:S4 AND S8
S11	0	S10 NOT S9
S12	1	S1(S)S7
S13	0	S12 NOT S10
S14	47	S2(S)S7
S15	138	S5:S6(5N)S7
S16	1	S14(S)S15
<b>S17</b>	<b>1</b>	<b>S16 NOT S10 [not relevant]</b>
S18	1	S3:S4 AND S8
S19	0	S18 NOT S10

**9/3,AB,K/3** (Item 3 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00276168

**LOW COLOR PROCESSING, HEAT AND LIGHT STABILIZER SYSTEM FOR POLYPROPYLENE FIBER**

**SYSTEME STABILISATEUR PAR RAPPORT A LA LUMIERE ET A LA CHALEUR, ET A FAIBLE NIVEAU DE COLORATION, DESTINE AUX FIBRES DE POLYPROPYLENE**

Patent Applicant/Assignee:

CIBA-GEIGY AG,  
HORSEY Douglas W,  
KING Roswell E III,

Inventor(s):

HORSEY Douglas W,  
KING Roswell E III,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9424344 A1 19941027

Application: WO 94IB56 19940406 (PCT/WO IB9400056)

Priority Application: US 9348086 19930415

Designated States: AT AU BB BG BR BY CA CH CN CZ DE DK ES FI GB GE HU JP KG  
KP KR KZ LK LU LV MD MG MN MW NL NO NZ PL PT RO RU SD SE SI SK TJ TT UA  
US UZ VN

Publication Language: English

Fulltext Word Count: 7657

English Abstract

Blends of long chain N,N-dialkylhydroxylamines, selected phosphites and selected hindered amines are surprisingly effective in providing processing, long term heat aging and light stability performance and especially gas fade resistance to polypropylene fibers in the absence of a traditionally used phenolic antioxidant.

Fulltext Availability: Detailed Description

Detailed Description

... optimized.

Polypropylene is used extensively for the manufacture of fiber for residential, commercial and automotive **carpeting** . White and light-colored fiber can suffer from discoloration due to gas fade discoloration. Polypropylene...

...well-known as a potential source of such discoloration by the formation of quinone type **chromophores** as oxidation products or as the result of environmental exposure to the oxides of nitrogen...


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File Format: PDF/Adobe Acrobat - [View as HTML](#)M98-C1 1 **Chameleon Fibers: Dynamic Color Change From Tunable Molecular and Oligomeric**Devices <http://www.furman.edu/~hanks/ntc/> Richard V. Gregory, School of ...[www.ntcresearch.org/pdf-rpts/AnRp01/M98-C01-A1.pdf](http://www.ntcresearch.org/pdf-rpts/AnRp01/M98-C01-A1.pdf) - [Similar pages](#)

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... **Chameleon Fibers: Dynamic Color Change From Tunable Molecular and Oligomeric Devices**

Author: Richard V. Gregory, leader (TF&amp;PS, Clemson) Timothy Hanks (Furman ...

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... Strategies. Chain Orientation During Deformation of Semi-Solid Polymers.

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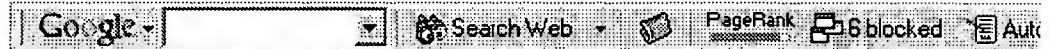
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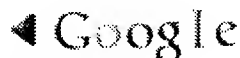
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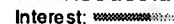
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# Chameleon Fibers: Color Tunable Molecular and Oligomeric Devices

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The creation of field-responsive fibers, chameleon fibers, is a multi-disciplinary endeavor. In addition to electroactive chromophores, polymeric materials able to generate a uniform, stable field for excitation of the color change process must be prepared. The requirements for these polymers include: appropriate electronic and optical properties, chemical compatibility with chromophores, processability and specific structural features. Not all of these requirements have been quantified, and even measuring some of them has required the development of new analytical methodologies. In this report we detail the progress made by the Chameleon Fibers Group over the past few year in designing and evaluating components of chameleon systems.

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I. An introduction to chameleon fibers and some strategies for creating them.

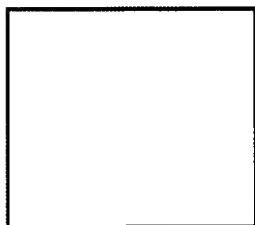
II. Synthesis of new polymers as chromophores and signal carriers.

III. Synthesis of monmeric and oligomeric chromophores.

IV. Processing of electrically conducting polymers.

V. Surface attachment of chromophores to conducting polymers.

V. New analytical methodologies for investigating chameleon fiber structure.



**1999)**

A group of 11 professors belonging to the National Association of Scholars have formed programs designed to reacquaint students with the Great Books of Western Civilization. The purpose of the programs, including one at Clemson led by Professor Mark Winchell, is to make sure that undergraduates obtain a solid foundation in Western thought, in light of students' tendency to take a scattershot approach to literature courses.

**Los Angeles Times  
(January 12, 2000)**

Research on technologically advanced fibers yields the promise of clothes that can adjust to weather conditions, fend off odors or even transmit data about an individual's location via



global positioning systems. Research by Clemson's Dick Gregory may produce chameleon fibers that can respond to an environment and change color or light-sensitive fabrics that can "understand" environmental conditions they are exposed to, such as radiation or chemical or pathological agents. Both could yield useful tools for military uniforms.

**The New York Times (March 26, 2000)**

The new trend in "wired" universities is requiring students to own a laptop computer or, in some cases, raising tuition enough to have one included as part of enrollment fees. Although as an institution, Clemson has opted to provide students with a "virtual laptop" by giving each student his or her own server space that allows access to a personal desktop from just about any computer on campus, the College of Engineering and Science is experimenting with a laptop requirement for 250 engineering majors as a pilot program.

**USA Today (March 31, 2000)**

Clemson announced its long-term plans for the Sandhill Research and Education Center in Columbia, which will focus on creating facilities and endowing programs to build a center for research and education on issues facing growing urban areas. Funding for the project is contingent upon the sale of property adjacent to the Columbia-based research center.

**USA Today (May 25, 2000)**

Clemson's Brooks Sports Science Institute joined with NASCAR team Roush Racing to paint the town - or, at least a car - in Clemson colors as part of an innovative scholarship program. The Clemson color scheme, complete with tiger



## Chameleon Fibers: Dynamic Color Change From Tunable Molecular and Oligomeric Devices

M98-C1

**Richard V. Gregory, leader (TF&PS, Clemson)**

**Timothy Hanks (Furman),**

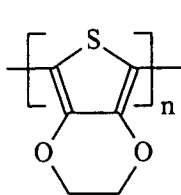
**Robert J. Samuels (Chem Eng, Georgia Tech)**

We are designing fibers that can quickly change their color, hue, depth of shade or optical transparency by application of an electrical or magnetic field. We are beginning to identify, characterize and produce some electroactive and magnetoactive oligomeric molecules with unique abilities to change their absorption and/or reflection of electromagnetic radiation in the infrared, visible and ultraviolet frequency ranges. We will introduce these molecules that possess these "tunable" properties into polymeric matrices and process them into fibers and films. We will evaluate them for their optical properties under differing electrical, magnetic and thermal stress and for color changes either as coatings, additives or stand alone fibers. We have already shown that varying the electrical or magnetic field affects the visible radiation absorption and color of these materials.

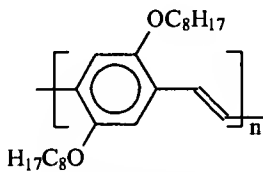
We have now modeled and synthesized several potential target monomers and oligomers and currently are processing them into fiber and film. We are evaluating these unique materials for the degree and depth of color change by using various processing methodologies. Initial studies include molecules that are derivatized oligomers of different types of electroactive and excitonic polymers such as polyethylene dioxythiophene and di-octyloxy para-phenylene-vinylene (See Figures). These molecules form the initial basis of our inves-

**We are designing fibers that can quickly change their color, hue, depth of shade or optical transparency by application of an electrical or magnetic field.**

tigations into production of true chameleon fibers capable of changing their adsorption characteristics, and therefore their color, under applied electrical or magnetic stress.



*Poly(ethylene-dioxythiophene)*



*di-Octyloxy*

*poly(para-phenylene-vinylene)*

[Other Contributors: Graduate Students *Steve Hardaker, Mike Pepitone, Jun Wang, Huaidong Meng* (Clemson); *Runqing Ou, Tao Liu* (Georgia Tech); Post Doctoral: *Xingwu Wang* (Clemson)]

Project Web Site Address:

**Richard V. Gregory, an Associate Professor in the School of Textile, Fiber and Polymer Science at Clemson, joined the faculty in 1990. He received his Ph.D. in physical chemistry at Clemson in 1984 and continued with postdoctoral work in polymer spectroscopy whereupon he joined the research staff at Milliken. Dick's research interests include the formation, characterization and potential industrial applications of conductive polymers and the interaction of ultraviolet radiation with polymers.**

**richar6@clemson.clemson.edu  
(864)-656-5961**

**<http://www.eng.clemson.edu/textiles/faculty/gregory.html>**



**Timothy Hanks, an Associate Professor of Chemistry at Furman University, joined the faculty in 1990. He earned a B.S. in chemistry from South Dakota School of Mines and Technology in 1982 and a Ph.D. in organic chemistry from Montana State in 1986. After postdoctoral research at Minnesota, Tim was a visiting assistant professor at Clemson. His research interests include nanoporous solids, organometallic polymers for microelectronics and electro-responsive polymers for non-linear optics, catalysis and sensing applications.**

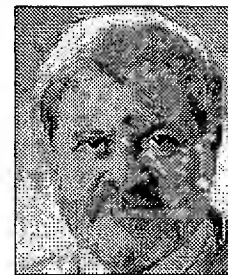
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**Robert J. Samuels, a Chemical Engineering Professor at Georgia Tech since 1979, received a Ph.D. in polymer chemistry from University of Akron in 1961. During an 18 year career at Hercules, Robert was an Adjunct Professor at the Universities of Delaware and Washington. His research interests include rapid non-destructive characterization of anisotropic polymers, deformation kinetics of polymer systems, and prediction of advanced material behavior. He is author of the book *Structured Polymer Properties* and the recipient of the 1999 International Research Award of the Society of Plastics Engineers.**

**robert.samuels@che.gatech.edu  
(404)-894-2885**





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Questions about the scope or the results of the search? Contact *the EIC searcher or contact:*

**John Sims, EIC 3700 Team Leader**  
308-4836, CP2-2C08

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➤ I am an examiner in Workgroup:  Example: 3730

➤ Relevant prior art **found**, search results used as follows:

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- ☐ Helped examiner better understand the state of the art in their technology.

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- ☐ Foreign Patent(s)
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# STIC Search Report

## EIC 3700

STIC Database Tracking Number 103190

TO: Nini Legesse  
Location: cp2 10b10  
Art Unit: 3711

Case Serial Number: 09/996461

From: Jeanne Horrigan  
Location: EIC 3700  
CP2-2C08  
Phone: 305-5934

[jeanne.horrigan@uspto.gov](mailto:jeanne.horrigan@uspto.gov)

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Attached are the search results for the impact and roll measurement device, including inventor and prior art searches in foreign and international patent databases; and prior art searches in sports and product and general interest non-patent literature databases, and on the Web via the Google search engine. *textile and*

Also attached is a search feedback form. Completion of the form is voluntary. Your completing this form would help us improve our search services.

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